

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application:

THE CLAIMS

1. (**Currently Amended**) A method ~~related to a mobile station for transferring user data in a wireless packet data network over a radio interface between the mobile station and a network element, wherein the method comprises the steps of:~~ comprising:

at a certain protocol layer, receiving a first packet data message from an upper protocol layer, which first packet data message belongs to a first packet data protocol (PDP) context characterised by certain first connection information,

at said certain protocol layer, receiving a second packet data message from an upper protocol layer, which second packet data message belongs to a second packet data protocol (PDP) context characterised by certain second connection information,

reordering said first packet data message and said second packet data message at said certain protocol layer according to a relative urgency of transmission of said first and second packet data protocol (PDP) contexts, and

delivering said first packet data message and said second packet data message further from said certain protocol layer in reordered order,

wherein the method is performed by a mobile station to transfer user data in a wireless packet data network.

2. (**Currently Amended**) A method according to claim 1, wherein ~~the steps of~~ receiving the first packet data message and receiving the second packet data message precede ~~a step of~~ configuring ~~comprising further steps of:~~ generating packet data protocol (PDP) context activation messages for informing the network about the activation of packet data protocol (PDP) contexts for user data transmission, and transmitting packet data protocol (PDP) context activation messages to the network to associate the packet data protocol (PDP) contexts to the first packet data message and to the second packet data message.

3. **(Currently Amended)** A method according to claim 2, wherein the method further comprises ~~a step of~~ requesting an uplink resource for transmitting said packet data protocol (~~PDP~~) context activation messages.

4. **(Currently Amended)** A method according to claim 3, wherein the method further comprises ~~a step of~~ requesting an uplink ~~Temporary Block Flow (TBF)~~ temporary block flow for transmitting protocol activation packet data unit (~~PDU~~) messages.

5. **(Currently Amended)** A method according to claim 4, wherein ~~the step of~~ receiving comprises a preliminary ~~step of~~ checking that said first packet data messages and said second packet data messages are received in-sequence order according to said connection information of said first packet data message or said second packet data message.

6. **(Currently Amended)** A method according to claim 5, wherein the first packet data message containing first user data belongs to first packet data protocol (~~PDP~~) context, and the second packet data message containing second user data belongs to second packet data protocol (~~PDP~~) context.

7. **(Currently Amended)** A method according to claim 6, wherein said first and second user data comprising urgency of transmission profile, wherein the urgency of transmission profile includes an additional quality of service (QoS) information of the user data, the first packet data message and the second packet data message are reordered according to the urgency of transmission profile, if the first connection information differs from the second connection information, by first delivering the packet data unit message comprising higher urgency of transmission profile.

8. **(Currently Amended)** A method according to claim 7, wherein said first and second user data comprising urgency of transmission profile, wherein the urgency of transmission profile includes an additional quality of service (~~QoS~~) information of the user data, the first packet data unit (~~PDU~~) message and the second packet data unit (~~PDU~~) message are reordered according to

the urgency of transmission profile, if the first connection information is equal to the second connection information, by first delivering the packet data unit (PDU) message comprising higher urgency of transmission profile using other connection information.

9. **(Currently Amended)** A method according to claim 8, wherein ~~the method comprises further steps: the step of~~ reordering further comprises buffering said second packet data messages into a packet data transfer queue for a period of time said first packet data message transfer is on-going, and ~~the step of~~ delivering further comprises delivering said second packet data messages after said first packet data message delivery is completed.

10. **(Currently Amended)** A method according to claim 9, wherein the wireless packet data network is comprised of a ~~General Packet Radio Service (GPRS)~~ general packet radio service network, wherein said first packet data messages and said second packet data messages are ~~Logical Link Controller (LLC)~~ logical link controller packet data unit (PDU) messages, and where the protocol activation message activates a ~~GPRS Mobility Management (GMM)~~ general packet radio service mobility management unit to associate the packet data protocol (PDP) context to said first packet data messages and to said second packet data messages.

11. **(Currently Amended)** A method according to claim 10, wherein a ~~Logical Link Controller (LLC)~~ logical link controller unit assigns a first ~~Service Access Point Indicator (SAPI)~~ service access point indicator of a ~~GPRS Mobility Management (GMM)~~ general packet radio service mobility management unit to associate said first connection information of said first packet data message, and a second ~~Service Access Point Indicator (SAPI)~~ service access point indicator of a ~~GPRS Mobility Management (GMM)~~ general packet radio service mobility management unit to associate said second connection information of said second packet data message; said first ~~SAPI~~ service access point indicator value being different than said second ~~SAPI~~ service access point indicator value.

12. **(Currently Amended)** A method according to claim 11, wherein said first packet data message and said second packet data message are reordered according to said first ~~SAPI~~ service

access point indicator value and said second SAPI service access point indicator value.

13. (**Currently Amended**) A method according to claim 12, wherein a ~~Radio-Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit reorders said first packet data message and said second packet data message according to said first SAPI service access point indicator value and said second SAPI service access point indicator value.

14. (**Currently Amended**) A method according to claim 13, wherein a ~~Radio-Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit reads a used SAPI service access point indicator value of the ~~Logical Link Controller (LLC)~~ logical link controller packet data unit (PDU) message from the ~~LLC PDU~~ logical link controller packet data unit message.

15. (**Currently Amended**) A method according to claim 14, wherein after sending the last ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile the ~~Radio-Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit initiates transmitting ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile.

16. (**Currently Amended**) A method according to claim 14, wherein after sending the last ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile the ~~Radio-Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit starts a timer with a predetermined timeout value and after said timeout value, said ~~RLC/MAC~~ radio link control/medium access control unit initiates transmitting ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile if said ~~RLC/MAC~~ radio link control/medium access control unit has not received a new ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile during said predetermined timeout value.

17. **(Currently Amended)** A method according to claim 14, wherein during transmitting ~~LLC PDU logical link controller packet data unit~~ messages not carrying high priority urgency of transmission profile the ~~Radio-Link Control/Medium Access Control (RLC/MAC) radio link control/medium access control~~ unit interrupts said transmission if said ~~RLC/MAC radio link control/medium access control~~ unit receives a new ~~LLC PDU logical link controller packet data unit~~ message carrying high priority urgency of transmission profile during said transmission, and said ~~RLC/MAC radio link control/medium access control~~ unit initiates transmitting said new ~~LLC PDU logical link controller packet data unit~~ message carrying high priority urgency of transmission profile.

18. **(Currently Amended)** A method according to claim 17, wherein said ~~RLC/MAC radio link control/medium access control~~ unit buffers said ~~LLC PDU logical link controller packet data unit~~ messages not carrying high priority urgency of transmission profile by generating a ~~LLC PDU logical link controller packet data unit~~ border into the ~~Radio-Link Control (RLC) radio link control~~ data block.

19. **(Currently Amended)** A method according to claim 17, wherein during transmitting ~~LLC PDU logical link controller packet data unit~~ message with ~~SAPI service access point indicator~~ value 7 not carrying high priority urgency of transmission profile, the ~~Radio-Link Control/Medium Access Control (RLC/MAC) radio link control/medium access control~~ unit interrupts said transmission if said ~~RLC/MAC radio link control/medium access control~~ unit receives a new ~~LLC PDU logical link controller packet data unit~~ message with ~~SAPI service access point indicator~~ value 3 carrying high priority urgency of transmission profile during said transmission, said ~~RLC/MAC radio link control/medium access control~~ unit buffers said ~~LLC PDU logical link controller packet data unit~~ message with ~~SAPI service access point indicator~~ value 7 not carrying high priority urgency of transmission profile and initiates transmitting said new ~~LLC PDU logical link controller packet data unit~~ message with ~~SAPI service access point indicator~~ value 3 carrying high priority urgency of transmission profile.

20. **(Currently Amended)** A method according to claim 11, wherein a ~~Radio-Link~~

~~Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit initiates an uplink ~~Temporary Block Flow (TBF)~~ temporary block flow and indicates to a ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control /medium access control of the network if a ~~RLC~~ radio link control ACK or a ~~RLC~~ radio link control UNACK mode is to be used when transmitting packet data messages.

21. **(Currently Amended)** A method according to claim 20, wherein ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control of the a mobile station (~~MS~~) orders said first packet data message to be delivered in the ~~RLC~~ radio link control UNACK mode and said second packet data to be delivered in the ~~RLC~~ radio link control ACK mode.

22. **(Currently Amended)** A method according to claim 9, wherein ~~the step of~~ receiving comprises a preliminary ~~step of~~ checking that said first packet data messages and said second packet data messages are received in-sequence order according to a window number inside a ~~Logical Link Control (LLC)~~ logical link control header of said first packet data message or said second packet data message.

23. **(Currently Amended)** A mobile station (~~MS~~) ~~for transferring user data in a wireless packet data network, the mobile station (MS) comprising~~

a transceiver ~~for transmitting and receiving~~ configured to transmit and receive packet data messages, wherein the mobile station (~~MS~~) comprises:

a controller configured to generate packet data protocol (~~PDP~~) context activation messages for informing ~~the~~ a network about the activation of packet data protocol (~~PDP~~) contexts for user data transmission, and

a layered transmission protocol arrangement comprising a certain protocol layer entity ~~as well as and~~ higher protocol layer entities, ~~of which~~ where said certain protocol layer entity is configured to receive packet data messages belonging to different packet data protocol (~~PDP~~) contexts from at least one upper protocol layer, to reorder packet data messages received from at least one upper protocol layer according to a relative urgency of transmission of packet data

protocol (PDP) contexts that the packet data messages belong to, and to deliver packet data messages further from said certain protocol layer in reordered order.

24. **(Currently Amended)** A mobile station (MS) according to claim 23, wherein the controller requests an uplink ~~Temporary Block Flow (TBF)~~ temporary block flow for transmitting said packet data protocol (PDP) context activation messages.

25. **(Currently Amended)** A mobile station (MS) according to claim 24, wherein the controller, during reception, is arranged to check that said first packet data messages and said second packet data messages are received in-sequence order according to a connection information of said first packet data message or said second packet data message.

26. **(Currently Amended)** A mobile station (MS) according to claim 25, wherein said first packet data message containing first user data is arranged to belong to said packet data protocol (PDP) context and said second packet data unit (PDU) message containing second user data is arranged to belong to said packet data protocol (PDP) context.

27. **(Currently Amended)** A mobile station (MS) according to claim 26, wherein said first and second user data comprising urgency of transmission profile, wherein the urgency of transmission profile includes an additional quality of service (QoS) information of the user data, the first packet data message and the second packet data message are arranged to be reordered according to the urgency of transmission profile, if the first connection information differs from the second connection information, by first delivering the packet data unit message comprising higher urgency of transmission profile.

28. **(Currently Amended)** A mobile station (MS) according to claim 27, wherein said first and second user data comprising urgency of transmission profile, wherein the urgency of transmission profile includes an additional quality of service (QoS) information of the user data, the first packet data unit (PDU) message and the second packet data unit (PDU) message are arranged to be reordered according to the urgency of transmission profile, if the first connection

information is equal to the second connection information, by first delivering the packet data unit (PDU) message comprising higher urgency of transmission profile using other connection information.

29. **(Currently Amended)** A mobile station (MS) according to claim 28, wherein the layered transmission protocol arrangement is arranged to buffer said second data messages into a packet data transfer queue for a period of time said first packet data message transfer is on-going, and to deliver said second packet data messages after said first packet data delivery is completed.

30. **(Currently Amended)** A mobile station (MS) according to claim 29, wherein the wireless packet data network is arranged to comprise of a ~~General Packet Radio Service (GPRS)~~ general packet radio service network, wherein said first packet data messages and said second packet data messages are ~~Logical Link Controller (LLC)~~ logical link controller packet data unit (PDU) messages, and where the protocol activation message is arranged to activate a ~~GPRS Mobility Management (GMM)~~ general packet radio service mobility management unit to associate the packet data protocol (PDP) context to said first packet data messages and to said second packet data messages.

31. **(Currently Amended)** A mobile station (MS) according to claim 30, wherein a ~~Logical Link Controller (LLC)~~ logical link controller unit is arranged to assign a first ~~Service Access Point Indicator (SAPI)~~ service access point indicator of a ~~GPRS Mobility Management (GMM)~~ general packet radio service mobility management unit to be associated to said first connection information of said first packet data message, and a second ~~Service Access Point Indicator (SAPI)~~ service access point indicator of a ~~GPRS Mobility Management (GMM)~~ general packet radio service mobility management unit to be associated to said second connection information of said second packet data message; said first ~~SAPI~~ service access point indicator value being different than said second ~~SAPI~~ service access point indicator value.

32. **(Currently Amended)** A mobile station (MS) according to claim 31, wherein said layered transmission protocol arrangement is arranged to reorder said first packet data message

and said second packet data message according to said first ~~SAPI~~ service access point indicator value and said second ~~SAPI~~ service access point indicator value.

33. **(Currently Amended)** A mobile station (~~MS~~) according to claim 31, wherein a ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to reorder said first packet data message and said second packet data message according to said first ~~SAPI~~ service access point indicator value and said second ~~SAPI~~ service access point indicator value.

34. **(Currently Amended)** A mobile station (~~MS~~) according to claim 33, wherein a ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to read a used ~~SAPI~~ service access point indicator value of the ~~Logical Link Controller (LLC)~~ logical link controller packet data unit (PDU) message from the ~~LLC PDU~~ logical link controller packet data unit message.

35. **(Currently Amended)** A mobile station (~~MS~~) according to claim 34, wherein after sending the last ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile the ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to initiate transmitting ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile.

36. **(Currently Amended)** A mobile station (~~MS~~) according to claim 34, wherein after sending the last ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile, the ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to start a timer with a predetermined timeout value and after said timeout value, said ~~RLC/MAC~~ radio link control/medium access control unit is arranged to initiate transmitting ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile if said ~~RLC/MAC~~ radio link control/medium access control unit has not received a new ~~LLC PDU~~ logical link controller

packet data unit message carrying high priority urgency of transmission profile during said predetermined timeout value.

37. **(Currently Amended)** A mobile station (~~MS~~) according to claim 34, wherein during transmitting ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile, the ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to interrupt said transmission if said ~~RLC/MAC~~ radio link control/medium access control unit receives a new ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile during said transmission, and said ~~RLC/MAC~~ radio link control/medium access control unit is arranged to initiate transmitting said new ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile.

38. **(Currently Amended)** A mobile station (~~MS~~) according to claim 37, wherein said ~~RLC/MAC~~ radio link control/medium access control unit is arranged to buffer said ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile by generating a ~~LLC PDU~~ logical link controller packet data unit border into the ~~Radio Link Control (RLC)~~ radio link control data block.

39. **(Currently Amended)** A mobile station (~~MS~~) according to claim 37, wherein during transmitting ~~LLC PDU~~ logical link controller packet data unit message with SAPI= a service access point indicator of 7 not carrying high priority urgency of transmission profile, the ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to interrupt said transmission if said ~~RLC/MAC~~ radio link control/medium access control unit receives a new ~~LLC PDU~~ logical link controller packet data unit message with SAPI= a service access point indicator of 3 carrying high priority urgency of transmission profile during said transmission, said ~~RLC/MAC~~ radio link control/medium access control unit is arranged to buffer said ~~LLC PDU~~ logical link controller packet data unit message with SAPI= a service access point indicator of 7 not carrying high priority urgency of transmission profile and to initiate transmitting said new ~~LLC PDU~~ logical link controller packet data unit message with

~~SAPI~~= a service access point indicator of 3 carrying high priority urgency of transmission profile.

40. **(Currently Amended)** A mobile station (~~MS~~) according to claim 31, wherein a ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to initiate an uplink ~~Temporary Block Flow (TBF)~~ temporary block flow and arranged to indicate to a ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control of the network if a ~~RLC~~ radio link control ACK or a ~~RLC~~ radio link control UNACK mode is to be used when transmitting packet data messages.

41. **(Currently Amended)** A mobile station (~~MS~~) according to claim 40, wherein ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control is arranged to order said first packet data message to be delivered in the ~~RLC~~ radio link control UNACK mode and said second packet data to be delivered in the ~~RLC~~ radio link control ACK mode.

42. **(Currently Amended)** A mobile station (~~MS~~) according to claim 29, wherein the controller, during reception, is arranged to check that said first packet data messages and said second packet data messages are received in-sequence order according to a window number inside a ~~Logical Link Control (LLC)~~ logical link control header of said first packet data message or said second packet data message.

43. **(Currently Amended)** A method ~~related to a network element of a wireless network for transferring user data between a mobile station (MS) and a wireless packet data network, the method comprising the steps of:~~

at a certain protocol layer, receiving a first packet data message from an upper protocol layer, which first packet data message belongs to a first packet data protocol (~~PDP~~) context characterised by certain first connection information,

at said certain protocol layer, receiving a second packet data message from an upper protocol layer, which second packet data message belongs to a second packet data protocol (~~PDP~~) context characterised by certain second connection information,

reordering said first packet data message and said second packet data message at said certain protocol layer according to a relative urgency of transmission of said first and second packet data protocol (PDP) contexts, and

delivering said first packet data message and said second packet data message further from said certain protocol layer in reordered order,

wherein the method is performed by a network element of a wireless network.

44. **(Currently Amended)** A method according to claim 43, wherein ~~in the steps of receiving~~ said first packet data message and said second packet data message precede ~~a step of configuring~~ comprising ~~further step of receiving~~ packet data protocol (PDP) context activation messages for the activation of packet data protocol (PDP) contexts for user data transmission.

45. **(Currently Amended)** A method according to claim 44, wherein ~~the steps of receiving~~ said first packet data message and said second packet data message comprise a preliminary ~~step~~ of checking that said first packet data messages and said second packet data messages are received in-sequence order according to said connection information of said first packet data message or said second packet data message.

46. **(Currently Amended)** A method according to claim 45, wherein the first packet data message containing first user data belongs to first packet data protocol (PDP) context, and the second packet data message containing second user data belongs to second packet data protocol (PDP) context.

47. **(Currently Amended)** A method according to claim 46, wherein said first and second user data comprising urgency of transmission profile, wherein the urgency of transmission profile includes an additional quality of service (~~QoS~~) information of the user data, the first packet data message and the second packet data message are reordered according to the urgency of transmission profile, if the first connection information differs from the second connection information, by first delivering the packet data unit message comprising higher urgency of transmission profile.

48. **(Currently Amended)** A method according to claim 47, wherein said first and second user data comprising urgency of transmission profile, wherein the urgency of transmission profile includes an additional quality of service (~~QoS~~) information of the user data, the first packet data unit (~~PDU~~) message and the second packet data unit (~~PDU~~) message are reordered according to the urgency of transmission profile, if the first connection information is equal to the second connection information, by first delivering the packet data unit (~~PDU~~) message comprising higher urgency of transmission profile using other connection information.

49. **(Currently Amended)** A method according to claim 48, wherein the method further comprises ~~further steps: the step of~~ reordering ~~further comprises~~ comprising buffering said second packet data messages into a packet data transfer queue for a period of time said first packet data message transfer is on-going, and ~~the step of~~ delivering further comprises delivering said second packet data messages after said first packet data message delivery is completed.

50. **(Currently Amended)** A method according to claim 49, wherein a ~~Logical Link Controller (LLC)~~ logical link controller unit assigns a first ~~Service Access Point Indicator (SAPI)~~ of a ~~GPRS Mobility Management (GMM)~~ general packet radio service mobility management unit to associate said first connection information of said first packet data message, and a second ~~Service Access Point Indicator (SAPI)~~ service access point indicator of a ~~GPRS Mobility Management (GMM)~~ general packet radio service mobility management unit to associate said second connection information of said second packet data message; said first ~~SAPI~~ service access point indicator value being different than said second ~~SAPI~~ service access point indicator value.

51. **(Currently Amended)** A method according to claim 50, wherein said first packet data message and said second packet data message are reordered according to said first ~~SAPI~~ service access point indicator value and said second ~~SAPI~~ service access point indicator value.

52. **(Currently Amended)** A method according to claim 51, wherein a ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit

reorders said first packet data message and said second packet data message according to said first SAPI service access point indicator value and said second SAPI service access point indicator value.

53. **(Currently Amended)** A method according to claim 52, wherein a ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit reads a used SAPI service access point indicator value of the ~~Logical Link Controller (LLC)~~ logical link controller packet data unit (PDU) message from the ~~LLC PDU~~ logical link controller packet data unit message.

54. **(Currently Amended)** A method according to claim 53, wherein after sending the last ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile the ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit initiates transmitting ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile.

55. **(Currently Amended)** A method according to claim 53, wherein after sending the last ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile the ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit starts a timer with a predetermined timeout value and after said timeout value, said ~~RLC/MAC~~ radio link control/medium access control unit initiates transmitting ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile if said ~~RLC/MAC~~ radio link control/medium access control unit has not received a new ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile during said predetermined timeout value.

56. **(Currently Amended)** A method according to claim 53, wherein during transmitting ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile the ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit interrupts said transmission if said ~~RLC/MAC~~ radio link

control/medium access control unit receives a new LLC PDU logical link controller packet data unit message carrying high priority urgency of transmission profile during said transmission, and said RLC/MAC radio link control/medium access control unit initiates transmitting said new LLC PDU logical link controller packet data unit message carrying high priority urgency of transmission profile.

57. **(Currently Amended)** A method according to claim 56, wherein said RLC/MAC radio link control/medium access control unit buffers said LLC PDU logical link controller packet data unit messages not carrying high priority urgency of transmission profile by generating a LLC PDU logical link controller packet data unit border into the Radio Link Control (RLC) radio link control data block.

58. **(Currently Amended)** A method according to claim 56, wherein during transmitting LLC PDU logical link controller packet data unit message with SAPI a service access point indicator value 7 not carrying high priority urgency of transmission profile, the Radio Link Control/Medium Access Control (RLC/MAC) radio link control/medium access control unit interrupts said transmission if said RLC/MAC radio link control/medium access control unit receives a new LLC PDU logical link controller packet data unit message with SAPI a service access point indicator value 3 carrying high priority urgency of transmission profile during said transmission, said RLC/MAC radio link control/medium access control unit buffers said LLC PDU logical link controller packet data unit message with SAPI service access point indicator value 7 not carrying high priority urgency of transmission profile and initiates transmitting said new LLC PDU logical link controller packet data unit message with SAPI service access point indicator value 3 carrying high priority urgency of transmission profile.

59. **(Currently Amended)** A method according to claim 50, wherein a Radio Link Control/Medium Access Control (RLC/MAC) radio link control/medium access control unit notifies the indication from ~~the~~ a mobile station (MS) if a RLC radio link control ACK or a RLC radio link control UNACK mode is to be used when transmitting packet data messages.

60. **(Currently Amended)** A method according to claim 59, wherein ~~Radio-Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control of the mobile station (MS) orders said first packet data message to be delivered in the ~~RLC~~ radio link control UNACK mode and said second packet data to be delivered in the ~~RLC~~ radio link control ACK mode.

61. **(Currently Amended)** A method according to claim 49, wherein ~~the step of~~ transferring comprises a preliminary ~~step of~~ checking that said first packet data messages and said second packet data messages are received in-sequence order according to a window number inside a ~~Logical Link Control (LLC)~~ logical link control header of said first packet data message or said second packet data message.

62. **(Currently Amended)** A method according to claim 43, wherein ~~the network element a~~ network element of a wireless network for transferring the packet data between a mobile station and a wireless packet data network is one of the following network elements: a ~~Serving General Packet Radio Support Node (SGSN)~~ serving general packet radio support node, a ~~Base Station Controller (BSC)~~ base station controller, ~~Mobile Switching Center (MSC)~~ mobile switching center and a ~~Packet Control Unit (PCU)~~ packet control unit comprising a ~~RLC/MAC~~ radio link control/medium access control unit.

63. **(Currently Amended)** A network element of a wireless network ~~for transferring user data between a mobile station (MS) and a wireless packet data network, wherein the network element comprises comprising:~~

a controller configured to generate packet data protocol (PDP) context activation messages for informing the network about the activation of packet data protocol (PDP) contexts for user data transmission, and

a layered transmission protocol arrangement comprising a certain protocol layer entity ~~as well as and~~ higher protocol layer entities, ~~of which where~~ said certain protocol layer entity is configured to receive packet data messages belonging to different packet data protocol (PDP) contexts from at least one upper protocol layer, to reorder packet data messages received from at

least one upper protocol layer according to a relative urgency of transmission of packet data protocol (PDP) contexts that the packet data messages belong to, and to deliver packet data messages further from said certain protocol layer in reordered order,

wherein the method is performed by a network element of a wireless network to transfer user data.

64. **(Currently Amended)** A network element according to claim 63, wherein the controller receives an uplink ~~Temporary Block Flow (TBF)~~ temporary block flow for configuring said packet data protocol (PDP) context activation messages.

65. **(Currently Amended)** A network element according to claim 64, wherein the controller, during reception, is arranged to check that said first packet data messages and said second packet data messages are received in-sequence order according to a connection information of said first packet data message or said second packet data message.

66. **(Currently Amended)** A network element according to claim 65, wherein said first packet data message containing first user data is arranged to belong to said packet data protocol (PDP) context and said second packet data unit (PDU) message containing second user data is arranged to belong to said packet data protocol (PDP) context.

67. **(Currently Amended)** A network element according to claim 66, wherein said first and second user data comprising urgency of transmission profile, wherein the urgency of transmission profile includes an additional quality of service (QoS) information of the user data, the first packet data message and the second packet data message are arranged to be reordered according to the urgency of transmission profile, if the first connection information differs from the second connection information, by first delivering the packet data unit message comprising higher urgency of transmission profile.

68. **(Currently Amended)** A network element according to claim 67, wherein said first and second user data comprising urgency of transmission profile, wherein the urgency of transmission

profile includes an additional quality of service (~~QoS~~) information of the user data, the first packet data unit (~~PDU~~) message and the second packet data unit (~~PDU~~) message are arranged to be reordered according to the urgency of transmission profile, if the first connection information is equal to the second connection information, by first delivering the packet data unit (~~PDU~~) message comprising higher urgency of transmission profile using other connection information.

69. (Original) A network element according to claim 68, wherein said layered transmission protocol arrangement is arranged to buffer said second data messages into a packet data transfer queue for a period of time said first packet data message transfer is on-going, and to deliver said second packet data messages after said first packet data delivery is completed.

70. (**Currently Amended**) A network element according to claim 69, wherein a ~~Logical Link Controller (LLC)~~ logical link controller unit is arranged to assign a first ~~Service Access Point Indicator (SAPI)~~ service access point indicator of a ~~GPRS Mobility Management (GMM)~~ general packet radio service mobility management unit to associate said first connection information of said first packet data message, and a second ~~Service Access Point Indicator (SAPI)~~ service access point indicator of a ~~GPRS Mobility Management (GMM)~~ general packet radio service mobility management unit to associate said second connection information of said second packet data message; said first ~~SAPI~~ service access point indicator value being different than said second ~~SAPI~~ service access point indicator value.

71. (**Currently Amended**) A network element according to claim 70, wherein the layered transmission protocol arrangement is arranged to reorder said first packet data message and said second packet data message according to said first ~~SAPI~~ service access point indicator value and said second ~~SAPI~~ service access point indicator value.

72. (**Currently Amended**) A network element according to claim 71, wherein a ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to reorder said first packet data message and said second packet data message according to said first ~~SAPI~~ service access point indicator value and said second ~~SAPI~~ service access point

indicator value.

73. (**Currently Amended**) A network element according to claim 72, wherein a ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to read a used SAPI service access point indicator value of the ~~Logical Link Controller (LLC)~~ logical link controller packet data unit (PDU) message from the ~~LLC PDU~~ logical link controller packet data unit message.

74. (**Currently Amended**) A network element according to claim 73, wherein after sending the last ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile the ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to initiate transmitting ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile.

75. (**Currently Amended**) A network element according to claim 73, wherein after sending the last ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile the ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to start a timer with a predetermined timeout value and after said timeout value, said ~~RLC/MAC~~ radio link control/medium access control unit initiates transmitting ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile if said ~~RLC/MAC~~ radio link control/medium access control unit has not received a new ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile during said predetermined timeout value.

76. (**Currently Amended**) A network element according to claim 73, wherein during transmitting ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile the ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to interrupt said transmission if said ~~RLC/MAC~~ radio link control/medium access control unit receives a new ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile during

said transmission, and said ~~RLC/MAC~~ radio link control/medium access control unit initiates transmitting said new ~~LLC PDU~~ logical link controller packet data unit message carrying high priority urgency of transmission profile.

77. **(Currently Amended)** A network element according to claim 76, wherein said ~~RLC/MAC~~ radio link control/medium access control unit is arranged to buffer said ~~LLC PDU~~ logical link controller packet data unit messages not carrying high priority urgency of transmission profile by generating a ~~LLC PDU~~ logical link controller packet data unit border into the ~~Radio Link Control (RLC)~~ radio link control data block.

78. **(Currently Amended)** A network element according to claim 76, wherein during transmitting ~~LLC PDU~~ logical link controller packet data unit message with ~~SAPI~~ service access point indicator value 7 not carrying high priority urgency of transmission profile, the ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to interrupt said transmission if said ~~RLC/MAC~~ radio link control/medium access control unit receives a new ~~LLC PDU~~ logical link controller packet data unit message with ~~SAPI~~ service access point indicator value 3 carrying high priority urgency of transmission profile during said transmission, said ~~RLC/MAC~~ radio link control/medium access control unit buffers said ~~LLC PDU~~ logical link controller packet data unit message with ~~SAPI~~ service access point indicator value 7 not carrying high priority urgency of transmission profile and initiates transmitting said new ~~LLC PDU~~ logical link controller packet data unit message with ~~SAPI~~ service access point indicator value 3 carrying high priority urgency of transmission profile.

79. **(Currently Amended)** A network element according to claim 70, wherein a ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control unit is arranged to notify the indication from ~~the~~ a mobile station (~~MS~~) if a ~~RLC~~ radio link control ACK or a ~~RLC~~ radio link control UNACK mode is to be used when transmitting packet data messages.

80. **(Currently Amended)** A network element according to claim 79, wherein ~~Radio Link Control/Medium Access Control (RLC/MAC)~~ radio link control/medium access control is

arranged to order said first packet data message to be delivered in the ~~RLC~~ radio link control UNACK mode and said second packet data to be delivered in the ~~RLC~~ radio link control ACK mode.

81. **(Currently Amended)** A network element according to claim 69, wherein the controller, during reception, is arranged to check that said first packet data messages and said second packet data messages are received in-sequence order according to a window number inside a ~~Logical Link Control (LLC)~~ logical link control header of said first packet data message or said second packet data message.

82. **(Currently Amended)** A network element according to claim 63, wherein the network element is arranged to be one of the following network elements: a ~~Serving General Packet Radio Support Node (SGSN)~~ serving general packet radio support node, a ~~Base Station Controller (BSC)~~ base station controller, ~~Mobile Switching Center (MSC)~~ mobile switching center and a ~~Packet Control Unit (PCU)~~ packet control unit comprising a ~~RLC/MAC~~ radio link control/medium access control unit.